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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,329

04/16/2004

Dieter Lau

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EXAMINER

FREAY, CHARLES GRANT

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

08/13/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/825,329

Applicant(s)

LAU, DIETER

Examiner

Charles G. Freay

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to because Figs. 2A and 2B contain disclosure which is presented in German, the specific elements of the drawing should only be labeled in English. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: the specification should include specific reference to the various elements/items shown in the figures and the figures should be specifically claimed so that their meaning can be understood.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims set forth steps and further more make reference to variables and processes which have not been adequately described so that one of ordinary skill in the art can understand how to perform the claimed method. For example, in claim 1 lines 4 and 5 it is set forth that the compressors are run in a fixed rotational speed ratio with respect to a characteristic map of the compressors. It is unclear if the speed ratio is a ratio for each compressor relative to a set point for that compressor or if the rotational speeds of all the compressors are fixed at a certain value relative to one another and then run

together. Furthermore, it is unclear what specific characteristic map is being referred to. There are many well known characteristic maps used to represent pump/compressor operation and a general reference to a characteristic map without a description of the map or how the map is generated is unclear. While Fig. 1 illustrates a map it is unclear what is being disclosed in the figure because no reference or description relating to or explaining the graph has been presented. In claim 1 line 6 and 7 "an equal percentage throughflow quantity adjustment" has been set forth but this variable has not been defined. Line 8 of the claim sets forth surge prevention valves but, minus any other structure, it is unclear what structural assembly is being claimed. The specification does not describe how to perform the step described in lines 9 and 10. Similarly the specification does not describe how to perform the step of claim 2. In claim 1 lines 12 and 13 it is unclear what determines an "optimum" value and the process of performing "a reciprocal mutually coordinated variation of the rotational speed desired values" has not been described. The disclosure has provided no description of what a reciprocal mutually coordinated variation is and it is unclear if this process is actually performed on the compressors or if this is a mathematical or control step done in a controller to determine a desired value. Claim 3 mentions "sequence control" but no description has been provided with regards to what this means or is. With regards to claim 4 the relationship between the controlled variables of the station controller and the mechanisms set forth for performing the steps in claim 1 has not been described. Similarly the relationship of the "optimization computer" to the rest of the control system

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and how it accomplishes a "mutually coordinated variation" of the rotational speeds has not been described.

The specification and the drawings provide some description, but again generalized steps are set forth without any clear description how to perform the generalized step or any clear description of the variables and their relationship to a disclosed structural arrangement. Figs. 2A and 2B disclose a number of items related to one another but it is unclear if this is an illustration of the control arrangement or a type of flow chart disclosing the actual steps and calculations performed by the various controllers set forth in the claims.

Conclusion

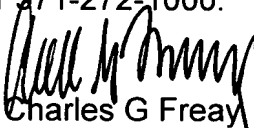
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hobbs, Battah ('237 and '148), Drob, Wichert and Saxena et al disclose compressor assembly control systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Stashick can be reached on 571-272-4561. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Charles G Freay
Primary Examiner
Art Unit 3746

CGF
August 4, 2007